

# Lower Sexual Satisfaction and Function Mediate the Association of Assault Military Sexual Trauma and Relationship Satisfaction in Partnered Female Service Members/Veterans

REBECCA K. BLAIS\*

*Little is known about the association of military sexual trauma (MST) and relationship satisfaction among partnered female service members/veterans (SM/Vs). Extant civilian literature shows a strong association between sexual trauma and poorer relationship outcomes, and theory suggests that sexual function and satisfaction may mediate this association. Given that as many as 40% of female SM/Vs report MST and roughly half of female veterans are partnered and in their peak sexual years, it is critical to understand the association of MST, relationship satisfaction, sexual function, and sexual satisfaction in this population. Female SM/Vs (N = 817) completed a demographic inventory, self-report measures of MST, relationship satisfaction, sexual function, and sexual satisfaction. One hundred fifty-one (18.48%) participants did not experience MST. Three hundred eighty-eight (47.49%) reported that they experienced harassment-only MST, and 278 (34.03%) reported assault MST. At the bivariate level, lower relationship satisfaction was associated with lower sexual function and satisfaction with large effect sizes. Assault MST was associated with lower relationship satisfaction and sexual function and satisfaction with small-to-medium effect sizes. No differences in relationship satisfaction, sexual satisfaction, and function between those with harassment-only and no MST were observed. Mediation analyses demonstrated that lower sexual function and satisfaction mediated the association of assault MST and relationship satisfaction. Couples' therapy offered to SM/Vs with MST should screen for type of MST, sexual function, and satisfaction. Addressing the sequelae of MST and increasing sexual function and satisfaction in these partnerships may be critical treatment targets.*

**Keywords:** Relationship Satisfaction; Military Sexual Trauma; Sexual Dysfunction; Sexual Dissatisfaction; Female Service Members/Veterans

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**T**here is a large body of research showing a strong link between more severe PTSD (as evidenced by a clinical diagnosis or symptom severity) and lower relationship satisfaction (see meta-analysis Taft, Watkins, Stafford, Street, & Monson, 2011), but few studies have examined specific traumas and their association with relationship satisfaction. Evidence suggests that deployments, for example, are associated with poorer relationship

\*Department of Psychology, Utah State University, Logan, UT.

Correspondence concerning this article should be addressed to Rebecca K. Blais, Department of Psychology, Utah State University, 2810 Old Main EDUC487, Logan, UT 84321. E-mail: rebecca.blais@usu.edu.

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adjustment (Allen, Rhoades, Stanley, & Markman, 2011), but not all deployments result in a PTSD diagnosis (e.g., Hoge et al., 2004). Moreover, among female service members, combat exposure was not directly associated with relationship satisfaction, but had an indirect association with relationship satisfaction through PTSD symptoms (Creech, Swift, Zlotnick, Taft, & Street, 2016). Understanding how specific traumas relate to relationship satisfaction among partnered service members/veterans (SM/Vs) can help elucidate pathways of distress, which may inform treatment targets in couples seeking therapy in which one member is a veteran or service member with a trauma history.

Given its interpersonal nature, one potential traumatic event that may relate to lower relationship satisfaction among partnered SM/Vs is sexual trauma. Within military samples, sexual trauma that occurred during military service is referred to as "military sexual trauma (MST)" by the Department of Veterans Affairs (VA; U.S. Government, 2014). MST can include any instance of unwanted touching, verbal harassment, or pressure for sexual favors. MST can also include more severe sexual acts, including sexual contact through force or threat of force. These types of MST exposures are referred to as "harassment" and "assault" MST, respectively. Much of what is understood about MST and its sequelae comes from VA screening data and corresponding medical charts of VA users. The VA MST screening question asks two questions: "During your military service, did you ever receive uninvited or unwanted sexual attention (i.e., touching, cornering, pressure for sexual favors, or inappropriate remarks, etc.)?" and "Did anyone ever use force or threat of force to have sex with you against your will?" The first screening question refers to harassment MST and the second screening question refers to assault MST. Responses to the screening items are coded as positive or negative for a history of MST, regardless of what experience a veteran endorsed (harassment-only, assault, or both). Thus, the screening data do not indicate the type of MST, just that MST occurred.

The VA initiated universal screening for MST in 1999 (Kimerling, Gima, Smith, Street, & Frayne, 2007). According to the screening data, MST is reported by 29.1% of females and 1.6% of males (VA Office of Mental Health & Suicide Prevention, 2018). However, studies examining the frequency of MST among VA and non-VA users show that MST is experienced by at least 40% of the veterans (e.g., Blais, Brignone, Fargo, Galbreath, & Gundlapalli, 2018; Wilson, 2018). Discrepant estimates of MST may be due to under-reporting (Blais et al., 2018), variability in screening practices (e.g., Wilson, 2018), and underutilization of VA care by female veterans (Kimerling et al., 2015), and may suggest that MST is a much greater public health concern than current VA estimates imply. Additional research on the sequelae of MST will result in a better understanding of posttraumatic challenges among survivors.

The association of MST with relationship satisfaction among partnered SM/Vs is understudied, but civilian data show a direct link between a history of sexual assault and poor relationship outcomes (Berthelot, Godbout, Hébert, Goulet, & Bergeron, 2014; Georgia, Roddy, & Doss, 2017; Godbout, Sabourin, & Lussier, 2009; Whisman, 2006). In one study of military service members that examined the association between premilitary sexual assault and romantic relationship satisfaction, findings were consistent with civilian literature: Military service members who reported a history of childhood sexual assault reported lower satisfaction in their current romantic relationship relative to those without a history of childhood sexual assault (Miller, Schaefer, Renshaw, & Blais, 2013). As the majority of female SM/Vs are partnered (Patten & Parker, 2011; Department of Veteran's Affairs, 2016), and estimates of exposure to sexual trauma during military service among married or partnered SM/Vs range from 32% to 52% depending on sampling procedures (Barth et al., 2016; Kimerling et al., 2007; Morral, Gore, & Schell, 2014), understanding the association of MST and relationship satisfaction may provide novel information about a notable subset of all SM/Vs.

One mechanism through which MST might relate to poorer relationship satisfaction is through sexual dysfunction and dissatisfaction. Sexual dysfunction includes difficulties completing the sexual response cycle and can manifest itself in clinical diagnoses including orgasmic disorder, arousal disorder, or genito-pelvic pain disorders (American Psychiatric Association [APA], 2013). Dissatisfaction can include complaints related to sexual compatibility or communication with one's partner or feeling sexually unfulfilled in one's relationship (e.g., Meston & Trapnell, 2005). Sexual dysfunction and dissatisfaction are not well studied in service member and veteran samples, but of the limited research that is available, studies show that a history of MST is associated with higher sexual dysfunction and dissatisfaction (McCall-Hosenfeld, Liebschutz, Spiro, & Seaver, 2009; Turchik et al., 2012), and assault, relative to harassment-only, MST is associated with higher risk for sexual dysfunction and dissatisfaction (Blais, Brignone, Fargo, Andresen, & Livingston, *in press*). Such findings are consistent with a larger body of civilian research showing that survivors of sexual assault report decreased sexual contact, lower pleasure, and display heightened fear responses to sexual stimuli (see review, van Berlo & Ensink, 2000). Civilian data and theories of relationship function suggest that sexual trauma reduces intimacy in romantic relationships (Davis & Petretic-Jackson, 2000; Georgia et al., 2017; Whiffen & Oliver, 2004), suggesting that sexual function and satisfaction may be the mechanisms through which MST relates to poor relationship satisfaction among partnered female SM/Vs.

The purpose of the current study was to examine whether lower sexual function and satisfaction mediates the association of history and type of MST and romantic relationship satisfaction in a sample of partnered female SM/Vs. It was hypothesized that a history of MST, and assault MST in particular, would be associated with poorer romantic relationship satisfaction, and that this association would be mediated by lower sexual function and sexual satisfaction. In all analyses, duration of their current relationship and age were included as covariates.

## METHOD

### Participants

Participants were 817 partnered female SM/Vs who were recruited via Facebook or through electronic listservs. The majority of the sample reported that they were married (vs. partnered but not married;  $n = 613$ , 75.03%), had an income  $\geq \$50,000/\text{year}$  ( $n = 484$ , 59.24%), identified as White ( $n = 626$ , 76.62%), reported service in the Army ( $n = 447$ , 54.71%), and were discharged from the military ( $n = 610$ , 74.66%).

### Procedure

Advertisements were targeted toward partnered female SM/Vs. Those who were interested in participating were provided with a link to a Qualtrics survey where they completed preliminary screening items confirming female sex, a history of military service, and consenting age (age 18 or older). Those who met the screening criteria advanced in the survey and were provided with an Institutional Review Board (IRB) Letter of Information (LoI) and all study questions. Being in a romantic relationship was not an exclusion criterion to participate in the study from which these data were drawn, but those who indicated that they were not currently partnered or married ( $n = 16$ ) were excluded from the current analysis given the focus on current relationship function. Identifying information was not collected with survey responses to maintain anonymity, but participants were directed to a separate Qualtrics survey where they could enter their name and

mailing address to facilitate compensation of \$15. Identifying information was not linked to study data in any way. This study was approved by the Utah State University IRB.

## Measures

An inventory designed by the author assessed demographic and military service characteristics including age, income, marital status, relationship duration, branch of service, and discharge status.

Relationship satisfaction, the primary outcome measure, was assessed using the *Couples Satisfaction Index-4* (CSI-4; Funk & Rogge, 2007). The CSI-4 is a four-item measure assessing overall relationship satisfaction. A sample item includes "Please indicate the degree of happiness, all things considered, of your relationship." Items are scored using a Likert scale with varying anchors that range from 0-5 or 0-6. The four items are summed for a total score that ranges from 0 to 21. Higher scores indicate greater relationship satisfaction, and scores <13.5 are indicative of distressed relationships (Funk & Rogge, 2007). Psychometric properties in the norm sample demonstrated that the CSI-4 has adequate convergent validity with other measures of relationship satisfaction (Funk & Rogge, 2007). Cronbach's alpha in the current sample was adequate (Cronbach's  $\alpha = .93$ ).

History and type of MST, the primary independent variables, were assessed using a modified version of the VA *MST Screening Questionnaire*. Participants were asked to indicate which forms of harassment MST they experienced using an electronic checkmark. Options included touching, cornering, pressure for sexual favors, or verbal remarks. Endorsement of any of the harassment items resulted in a positive screen for harassment MST, regardless of how many items were endorsed. Assault MST was assessed via an affirmative response to the question: *When you were in the military, did someone ever use force or threat of force to have sexual contact with you against your will?* If participants answered "no" to the assault question or did not check any of the harassment items, they were deemed to have no history of MST.

Sexual function, one of the proposed mediators, was assessed using the *Female Sexual Function Index* (FSFI; Rosen et al., 2000). The FSFI is a 19-item self-report survey assessing overall sexual function (e.g., desire, lubrication, orgasm). A sample item includes "Over the past 4 weeks, how often did you feel sexual desire or interest?" Items are scored using a variably anchored Likert scale. All 19 items are summed for a total score that ranges from 1.2 to 30. Higher scores on this scale indicate higher sexual function. Scores <26.55 suggest probable issues with sexual function (Wiegel, Meston, & Rosen, 2005). Psychometric properties evaluated in other studies shows that the FSFI has good internal consistency, test-retest reliability, and adequate construct and divergent validity (Rosen et al., 2000). The current sample showed excellent internal reliability (Cronbach's  $\alpha = .97$ ).

Sexual satisfaction, the other proposed mediator, was assessed using the *Sexual Satisfaction Scale for Women* (SSS-W; Meston & Trapnell, 2005). The SSS-W is a 30-item self-report survey that assesses sexual satisfaction (e.g., compatibility with partner, satisfaction with communication) using a Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). A sample item includes "I feel content with my present sexual life." All 30 items are summed for a total score that ranges from 24 to 120. Higher scores are indicative of higher sexual satisfaction. No cut-off score to identify sexual dissatisfaction is suggested. Psychometric properties evaluated in other studies show that the SSS-W has good internal consistency and validity and can distinguish between women with and without sexual dysfunction (Meston & Trapnell, 2005). The current sample showed excellent internal reliability (Cronbach's  $\alpha = .96$ ).

## Statistical Analyses

Sample characteristics were computed using descriptive statistics in SPSS v.25 (IBM, 2017). Sexual satisfaction, sexual function, age, and relationship duration were standardized into  $z$  scores for all analyses. Bivariate correlations were used to assess the association between relationship satisfaction, sexual function, sexual satisfaction, harassment-only MST, assault MST, relationship duration, and age. Path analysis was then used to examine the associations between MST type, relationship satisfaction, sexual function, and satisfaction after accounting for covariates. Two dummy variables were included as exogenous variables that represented harassment-only MST and assault MST. The “no MST” group acted as a reference category for either type of MST. Sexual function and satisfaction were entered as mediator variables, and relationship satisfaction was entered as the dependent variable. Direct paths from both MST dummy variables to sexual function and satisfaction were specified, as were direct paths from sexual function and satisfaction to relationship satisfaction. No direct paths from the MST dummy variables to relationship satisfaction were specified, thus assuming mediation (i.e., only indirect effects from harassment-only and assault MST to relationship satisfaction through sexual function and satisfaction were assumed). Age and relationship duration were included as covariates in the model, with direct paths specified to relationship satisfaction, sexual function, and sexual satisfaction. Both MST dummy variables were allowed to correlate, as were sexual function and sexual satisfaction, and relationship duration and age (see Figure 1).

The path model was estimated using full information maximum likelihood (FIML) to account for any missing data (of note, 85.27% [ $n = 713$ ] had data on all variables included in the study). FIML utilizes all available data, thus maximizing statistical power and reducing bias in estimated parameters (Enders, 2010). Mediation effects were tested by estimating 95% confidence intervals (CIs) for indirect effects based on bias-corrected bootstrap estimates with 2,000 bootstrap samples (MacKinnon, 2008). Confidence intervals that did not include a value of zero were considered significant. All path analyses were run in MPlus (Muthén & Muthén, 1998–2017).

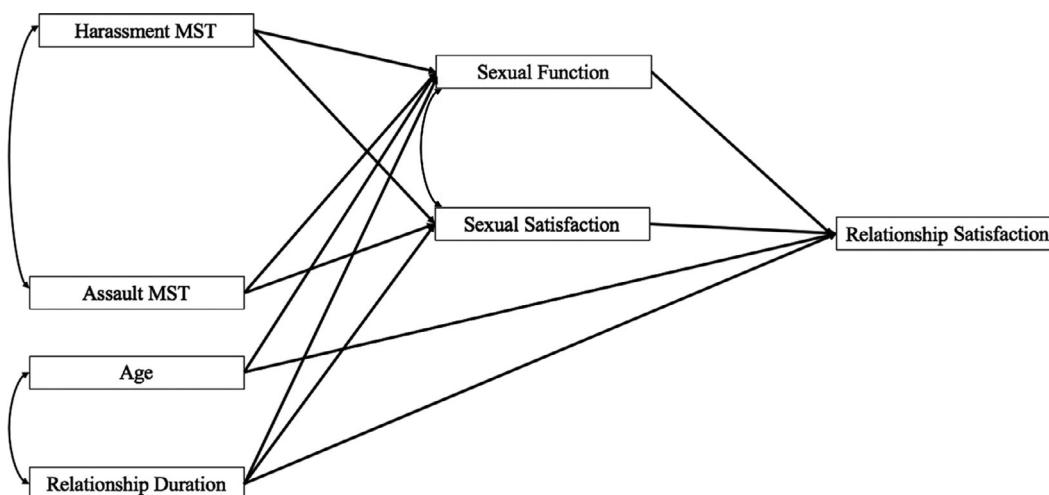


FIGURE 1. Path Model of Relationship Satisfaction, MST Type, Sexual Function, Sexual Satisfaction, and Covariates

## RESULTS

One hundred fifty-one (18.48%) participants indicated that they did not experience MST during their military service. Three hundred eighty-eight (47.49%) reported that they experienced harassment-only MST, and 278 (34.03%) reported assault MST. At the bivariate level, higher relationship satisfaction was associated with higher sexual function and satisfaction with a large effect size, and negatively associated with a history of assault MST, age, and relationship duration with small effect sizes. Relationship satisfaction was not associated with harassment-only MST. Assault MST was associated with harassment-only MST with a large effect size and with lower sexual satisfaction and function with small-to-medium effect sizes. Higher sexual function and sexual satisfaction were associated with a large effect size. Finally, older age was associated with poorer sexual function and satisfaction with small-to-medium effect sizes and relationship duration with a large effect size (Table 1).

TABLE 1  
*Correlations, Means, and Standard Deviations for All Variables Used in the Path Model (N = 817)*

Variable	1	2	3	4	5	6	7
1. Relationship satisfaction	—						
2. Harassment <sup>a</sup>	-.02	—					
3. Assault <sup>b</sup>	-.14**	-.68***	—				
4. Sexual function	.48***	-.03	-.20***	—			
5. Sexual satisfaction	.65***	-.06	-.24***	.64***	—		
6. Age	-.15***	.02	.05	-.10**	-.15***	—	
7. Relationship duration (months)	-.13***	-.04	-.07	-.17***	-.17***	.51***	—
<i>M</i>	14.28	.48	.34	22.05	84.01	32.07	74.23
<i>SD</i>	5.10	.50	.47	9.78	23.21	7.47	66.92

Notes. *M* = mean; *SD* = standard deviation.

<sup>a</sup>Dummy code altered to reflect history of harassment = 1, no MST = 0.

<sup>b</sup>Dummy code altered to reflect history of assault = 1, no MST = 0.

\*\*\*  $p \leq .001$ ; \*\*  $p \leq .01$ ; \*  $p \leq .05$

The path analysis model depicted in Figure 1 had a good fit to the data as evidenced by several fit indices,  $\chi^2(2, N = 817) = .71$ ,  $p = .70$ , CFI = 1.00, TLI = 1.00, SRMR = .002, and RMSEA = .00. Unstandardized estimates, standard errors, confidence intervals, and  $R^2$  values are shown in Table 2. Direct paths from harassment-only MST to sexual satisfaction and function were nonsignificant, though the path from harassment-only MST to sexual satisfaction approached significance ( $p = .08$ ). However, direct paths from assault MST to sexual satisfaction and function were significant and negative, indicating that a history of assault MST was associated with poorer sexual satisfaction and function relative to no MST. Direct paths from sexual function and satisfaction to relationship satisfaction were significant and positive, indicating that higher sexual function and satisfaction were associated with higher relationship satisfaction. Overall, between 6% and 8% of the variability in sexual function and satisfaction, respectively, were explained in the model. Shorter relationship duration was associated with lower sexual function and satisfaction but unrelated to relationship satisfaction. Age was unrelated to sexual function and satisfaction but showed a marginally significant association with relationship satisfaction ( $p = .08$ ).

The statistical significance of the indirect effects of harassment-only and assault MST on relationship satisfaction through sexual function and satisfaction were tested using bias-corrected bootstrap confidence intervals (CIs). Significant indirect effects are indicated by CIs that do not include a value of zero. The indirect effect of assault MST on

TABLE 2  
*Estimated Path Coefficients for the Model in Figure 1 (N = 817)*

Path	B	SE(B)	95% CI	p	R <sup>2</sup>
<b>Sexual function</b>					
Harassment	-.08	.10	-.26, .11	.42	
Assault	-.46	.10	-.66, -.26	<.001	
Age	-.02	.05	-.10, .09	.77	
Relationship duration	-.16	.04	-.25, -.08	<.001	.06
<b>Sexual satisfaction</b>					
Harassment	-.15	.09	-.32, .02	.08	
Assault	-.55	.10	-.75, -.36	<.001	
Age	-.06	.04	-.14, .03	.11	
Relationship duration	-.15	.04	-.23, -.07	<.001	.08
<b>Relationship satisfaction regressed on</b>					
Sexual function	.54	.19	.17, .95	.005	
Sexual satisfaction	2.93	.19	2.56, 3.29	<.001	
Age	-.29	.17	-.63, .02	.08	
Relationship duration	.07	.16	-.27, .37	.68	.43

Notes. B = unstandardized path coefficient; CI = confidence interval; SE = standard error.

R<sup>2</sup> values are based on the overall set of predictor variables included for a given mediator or outcome variable.

relationship satisfaction through sexual function ( $b = -.25$ , 95% CI = [-.51, -.08]) and satisfaction ( $b = -1.62$ , 95% CI = [-2.27, -1.02]) were significant, but the indirect effect of harassment-only MST on relationship satisfaction through sexual function ( $b = -.04$ , 95% CI = [-.17, .05]) and satisfaction ( $b = -.45$ , 95% CI [-.96, .07]) were not significant. In summary, the association of MST type, and assault in particular, with relationship satisfaction was indirect, through the effects of sexual function and sexual satisfaction, and the model accounted for 43% of the variance in relationship satisfaction.

## DISCUSSION

The current study examined whether relationship satisfaction among partnered female SM/Vs varied as a function of MST history and severity, and whether this association was mediated by lower sexual function and satisfaction. Results demonstrated that female SM/Vs who reported a history of assault MST were more likely to report poorer relationship satisfaction and lower sexual satisfaction and function relative to those reporting harassment-only or no MST. Moreover, the mechanism through which MST type related to relationship satisfaction was lower sexual function and satisfaction.

Such findings have important implications for couples' therapy, which has been shown to be effective in increasing relationship satisfaction among civilian dyads containing at least one partner with a history of sexual assault (Billette, Guay, & Marchand, 2008; MacIntosh & Johnson, 2008). In particular, it may be important to screen for history and severity of MST as well as sexual function and satisfaction during intake as these problems may need to be incorporated into case conceptualizations and treatment plans. Our findings suggest that when trying to improve relationship satisfaction among partnered SM/Vs with a history of MST, increasing sexual function and satisfaction may be critical components of successful treatment.

Information that may be critical to collect during screening includes whether the trauma included assault (e.g., force or threat of force). Though not examined in this study, it may also be important to inquire about frequency and severity of sexual traumas as

rates of revictimization among sexual trauma survivors are high (see review, Walker, Freud, Ellis, Fraine, & Wilson, 2019), and many individuals seen for care may have complex sexual trauma histories. Identifying and targeting the most severe trauma would be critical for trauma-informed care. Moreover, it may be critical to understand the relationship of the survivor to perpetrator given that psychological distress varies in complex ways by perpetrator type (Ullman, Filipas, Townsend, & Starzynski, 2006). Finally, screening for specific sexual dysfunctions or components of sexual satisfaction will also be key as both sexual function and sexual satisfaction are multifaceted constructs. For example, dysfunction may lie anywhere in the sexual response cycle, manifesting in problems with desire, arousal, lubrication, or ability to reach orgasm. Similarly, sexual satisfaction can include individual concerns about performance, difficulties feeling sexually fulfilled by one's partner, or a combination. A thorough examination of how sexual trauma relates to specific facets of sexual function and sexual satisfaction will provide targeted intervention information that may lead to more successful treatment outcomes.

It is possible that existing couples' therapies used in SM/Vs (e.g., Conjoint Behavior Couples' Therapy [Monson & Fredman, 2012]; Emotion Focused Therapy [Johnson & Greenberg, 1985]) could be augmented to explore and treat sexual issues, particularly since individual PTSD treatments do not improve sexual functioning (see review, O'Driscoll & Flanagan, 2016). Interventions that focus on processing the sexual trauma, helping the traumatized individual see themselves as a survivor rather than as a victim, enhancing the survivor's perception that sexual experiences are safe and consensual, and fostering the belief that the healing process is a joint effort between the survivor and their romantic partner may be particularly beneficial in addressing sexual trauma, relationship satisfaction, sexual dysfunction, and sexual dissatisfaction (McCarthy & Farr, 2011; Meston, Lorenz, & Stephenson, 2013; Nasim & Nadan, 2013).

Findings also support the need for additional research on the associations of sexual trauma and relationship satisfaction in military samples. The association between sexual trauma, particularly childhood sexual abuse, and relationship satisfaction in civilians is well-established (Georgia et al., 2017; Godbout et al., 2009; Whisman, 2006), but no studies of the association of MST and relationship satisfaction in military samples were identified. Future research in this domain may consider the additive risk of MST among SM/Vs reporting a history of childhood sexual abuse given the high rate of sexual revictimization in adulthood (see review, Walker et al., 2019), particularly among veterans (Schry, Beckham, & Calhoun, 2016).

Future research in this area should also explore the partner's experience of their spouse's MST, and the partner's relationship satisfaction, sexual function, and sexual satisfaction. Theories of relationship distress in military service members cite the importance of considering both individual- and couple-level concerns when conceptualizing and treating relationship issues (e.g., Couples' Adaptation to Stress Model; Nelson Goff & Smith, 2005), and extant literature shows a strong link between partners' attributions for their military spouses' trauma exposure and distress, and partners' relationship satisfaction (Renshaw, Allen, Carter, Markman, & Stanley, 2014).

Limitations of the current study include the use of cross-sectional data to examine a proposed mechanistic model of relationship satisfaction among SM/Vs with a history of MST. Data were also based on self-report. This area of inquiry would be strengthened by studies using longitudinal designs to determine the temporal associations of these experiences and concerns. A focus on conducting such studies in clinical samples may provide information about how to best serve those with appreciable levels of relational distress that are most likely to present to clinics for treatment. Future studies would also strengthen this area by examining specific facets of sexual dissatisfaction and dysfunction with MST and relationship satisfaction given that both sexual dysfunction and

dissatisfaction are multifaceted issues and the current study examined global distress in these areas. Indeed, a recent review demonstrated that among women with a history of sexual assault, low sexual desire and sexual arousal in particular were among the most frequently reported concerns (Pulverman, Kilimnik, & Meston, 2018), suggesting that specific components of sexual dysfunction and dissatisfaction may contribute the greatest negative impact on relationship functioning.

In conclusion, results from the current study show that a history of MST, and assault MST in particular, is associated with poorer relationship satisfaction and lower sexual function and satisfaction in female SM/Vs. Though based on cross-sectional data, findings suggest that the mechanism through which MST relates to relationship satisfaction is through lower sexual function and satisfaction. This is the first study to examine these associations so additional research is needed to replicate and extend these findings. Notwithstanding, such findings underscore the utility of screening for MST and sexual function and satisfaction among service members/veterans seeking couples' therapy.

## REFERENCES

- Allen, E. S., Rhoades, G. K., Stanley, S. M., & Markman, H. J. (2011). On the home front: Stress for recently deployed Army couples. *Family Process*, 50(2), 235–247. <https://doi.org/10.1111/j.1545-5300.2011.01357.x>.
- American Psychiatric Association (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC: American Psychiatric Association.
- Barth, S. K., Kimerling, R. E., Pavao, J., McCutcheon, S. J., Batten, S. V., Dursa, E. et al. (2016). Military sexual trauma among recent veterans: Correlates of sexual assault and sexual harassment. *American Journal of Preventive Medicine*, 50(1), 77–86. <https://doi.org/10.1016/j.amepre.2015.06.012>.
- Berthelot, N., Godbout, N., Hébert, M., Goulet, M., & Bergeron, S. (2014). Prevalence and correlates of childhood sexual abuse in adults consulting for sexual problems. *Journal of Sex and Marital Therapy*, 40(5), 434–443. <https://doi.org/10.1080/0092623X.2013.772548>.
- Billette, V., Guay, S., & Marchand, A. (2008). Posttraumatic stress disorder and social support in female victims of sexual assault: The impact of spousal involvement on the efficacy of cognitive-behavioral therapy. *Behavior Modification*, 32(6), 876–896. <https://doi.org/10.1177/0145445508319280>.
- Blais, R. K., Brignone, E., Fargo, J. D., Andresen, F. J., & Livingston, W. S. (in press). The importance of distinguishing between harassment and assault military sexual trauma during screening. *Military Psychology*.
- Blais, R. K., Brignone, E., Fargo, J. D., Galbreath, N. W., & Gundlapalli, A. V. (2018). Assailant identity and self-reported nondisclosure of military sexual trauma in partnered women veterans. *Psychological Trauma: Theory, Research, Practice, and Policy*, 10, 470–474. <https://doi.org/10.1037/tra0000320>.
- Creech, S. K., Swift, R., Zlotnick, C., Taft, C., & Street, A. E. (2016). Combat exposure, mental health, and relationship functioning among women veterans of the Afghanistan and Iraq wars. *Journal of Family Psychology*, 30(1), 43–51. <https://doi.org/10.1037/fam0000145>.
- Davis, J. L., & Petretic-Jackson, P. A. (2000). The impact of child sexual abuse on adult interpersonal functioning: A review and synthesis of the empirical literature. *Aggression and Violent Behavior*, 5, 291–328. [https://doi.org/10.1016/S1359-1789\(99\)00010-5](https://doi.org/10.1016/S1359-1789(99)00010-5).
- Department of Veterans Affairs (2016). *Profile of veterans: 2016*. Retrieved from [https://www.va.gov/vetdata/docs/SpecialReports/Profile\\_of\\_Veterans\\_2016.pdf](https://www.va.gov/vetdata/docs/SpecialReports/Profile_of_Veterans_2016.pdf)
- Department of Veterans Affairs, Office of Mental Health & Suicide Prevention (2018). Military sexual trauma screening report: Fiscal year 2018. Retrieved from <https://vaww.vashare.vha.va.gov/sites/mst/reports-and-data/screening-and-treatment>
- Enders, C. K. (2010). *Applied missing data analysis*. New York: Guilford.
- Funk, J. L., & Rogge, R. D. (2007). Testing the ruler with item response theory: Increasing precision of measurement for relationship satisfaction with the Couples Satisfaction Index. *Journal of Family Psychology*, 21(4), 572–583. <https://doi.org/10.1037/0893-3200.21.4.572>.
- Georgia, E. J., Roddy, M. K., & Doss, B. D. (2017). Sexual assault and dyadic relationship satisfaction: Indirect associations through intimacy and mental health. *Violence Against Women*, 28(8), 936–951. <https://doi.org/10.1177/1077801217727371>.
- Godbout, N., Sabourin, S., & Lussier, Y. (2009). Child sexual abuse and adult romantic adjustment: Comparison of single- and multiple-indicator measures. *Journal of Interpersonal Violence*, 24(4), 693–705. <https://doi.org/10.1177/0886260508317179>.

- Hoge, C. W., Castro, C. A., Messer, S. C., McGurk, D., Cotting, D. I., & Koffman, R. L. (2004). Combat duty in Iraq and Afghanistan, mental health problems, and barriers to care. *New England Journal of Medicine*, 351, 13–22. <https://doi.org/10.1056/NEJMoa040603>
- IBM Corp (2017). *IBM SPSS statistics for Macintosh, version 25.0*. Armonk, NY: IBM Corp.
- Johnson, S. M., & Greenberg, L. S. (1985). Emotionally focused couples therapy: An outcome study. *Journal of Marital and Family Therapy*, 11(3), 313–317. <https://doi.org/10.1111/j.1752-0606.1985.tb00624.x>.
- Kimerling, R., Gima, K., Smith, M. W., Street, A., & Frayne, S. (2007). The Veterans Health Administration and military sexual trauma. *American Journal of Public Health*, 97(12), 2160–2166. <https://doi.org/10.2105/AJPH.2006.092999>.
- Kimerling, R., Pavao, J., Greene, L., Karpenko, J., Rodriguez, A., Saweikis, M. et al. (2015). Access to mental health care among women Veterans: Is VA meeting women's needs? *Medical Care*, 53, 97–104. <https://doi.org/10.1097/MLR.0000000000000272>.
- MacIntosh, H. B., & Johnson, S. (2008). Emotionally focused therapy for couples and childhood sexual abuse survivors. *Journal of Marital and Family Therapy*, 34(3), 298–315. <https://doi.org/10.1111/j.1752-0606.2008.00074.x>.
- MacKinnon, D. P. (2008). *Introduction to statistical mediation analysis*. New York: Lawrence Erlbaum and Associates.
- McCall-Hosenfeld, J. S., Liebschutz, J. M., Spiro, A. I., & Seaver, M. R. (2009). Sexual assault in the military and its impact on sexual satisfaction in women veterans: A proposed model. *Journal of Women's Health*, 18(6), 901–909. <https://doi.org/10.1089/jwh.2008.0987>.
- McCarthy, B., & Farr, E. (2011). The impact of sexual trauma on sexual desire and function. *Advances in Psychosomatic Medicine*, 31, 105–120. <https://doi.org/10.1159/000328919>.
- Meston, C. M., Lorenz, T. A., & Stephenson, K. R. (2013). Effects of expressive writing on sexual dysfunction, depression, and PTSD in women with a history of childhood sexual abuse: Results from a randomized clinical trial. *Journal of Sexual Medicine*, 10(9), 2177–2189. <https://doi.org/10.1111/jsm.12247>.
- Meston, C., & Trapnell, P. (2005). Development and validation of a five-factor sexual satisfaction and distress scale for women: The Sexual Satisfaction Scale for Women (SSS-W). *Journal of Sexual Medicine*, 2(1), 66–81. <https://doi.org/10.1111/j.1743-6109.2005.20107.x>.
- Miller, A. B., Schaefer, K. E., Renshaw, K. D., & Blais, R. K. (2013). PTSD and marital satisfaction in military service members: Examining the simultaneous roles of childhood sexual abuse and combat exposure. *Child Abuse and Neglect*, 37(11), 979–985. <https://doi.org/10.1016/j.chabu.2013.05.006>.
- Monson, C. M., & Fredman, S. J. (2012). *Cognitive-behavioral conjoint therapy for PTSD: Harnessing the healing power of relationships*. New York: Guilford Press.
- Morral, A., Gore, K., & Schell, T. (2014). *Sexual assault and sexual harassment in the U.S. military (Volume 2)*. Retrieved from [http://www.rand.org/pubs/research\\_reports/RR870z2-1.html](http://www.rand.org/pubs/research_reports/RR870z2-1.html)
- Muthén, L. K., & Muthén, B. O. (1998–2017). *Mplus user's guide* (8th ed.). Los Angeles, CA: Muthén & Muthén.
- Nasim, R., & Nadan, Y. (2013). Couples therapy with childhood sexual abuse survivors (CSA) and their partners: Establishing a context for witnessing. *Family Process*, 52(3), 368–377. <https://doi.org/10.1111/famp.12026>.
- Nelson Goff, B., & Smith, D. B. (2005). Systemic traumatic stress: The couple adaptation to traumatic stress model. *Journal of Marital And Family Therapy*, 31(2), 145–157. <https://doi.org/10.1111/j.1752-0606.2005.tb01552.x>.
- O'Driscoll, C., & Flanagan, E. (2016). Sexual problems and post-traumatic stress disorder following sexual trauma: A meta-analytic review. *Psychology and Psychotherapy: Theory, Research and Practice*, 89(3), 351–367. <https://doi.org/10.1111/papt.12077>.
- Patten, B. E., & Parker, K. (2011). *Women in the U. S. military: Growing share, distinctive profile*. Pew social & demographic trends. Retrieved from [www.pewsocialtrends.org/files/2011/12/women-in-the-military.pdf](http://www.pewsocialtrends.org/files/2011/12/women-in-the-military.pdf)
- Pulverman, C. S., Kilimnik, C. D., & Meston, C. M. (2018). The impact of childhood sexual abuse on women's sexual health: A comprehensive review. *Sexual Medicine Reviews*, 6(2), 188–200. <https://doi.org/10.1016/j.sxmr.2017.12.002>.
- Renshaw, K. D., Allen, E. S., Carter, S. P., Markman, H. J., & Stanley, S. M. (2014). Partners' attributions for service members' symptoms of combat-related posttraumatic stress disorder. *Behavior Therapy*, 45(2), 187–198. <https://doi.org/10.1016/j.beth.2013.10.005>.
- Rosen, R., Brown, C., Heiman, J., Leiblum, S., Meston, C., Shabsigh, R. et al. (2000). The Female Sexual Function Index (FSFI): A multidimensional self-report instrument for the assessment of female sexual function. *Journal of Sex and Marital Therapy*, 26(2), 191–208. <https://doi.org/10.1080/009262300278597>.
- Schry, A. R., Beckham, J. C., & Calhoun, P. S. (2016). Sexual revictimization among Iraq and Afghanistan war era veterans. *Psychiatry Research*, 240, 406–411. <https://doi.org/10.1016/j.psychres.2016.04.016>.
- Taft, C. T., Watkins, L. E., Stafford, J., Street, A. E., & Monson, C. M. (2011). Posttraumatic stress disorder and intimate relationship problems: A meta-analysis. *Journal of Consulting and Clinical Psychology*, 79(1), 22–33. <https://doi.org/10.1037/a0022196>.

- Turchik, J. A., Pavao, J., Nazarian, D., Iqbal, S., McLean, C., & Kimerling, R. (2012). Sexually transmitted infections and sexual dysfunctions among newly returned veterans with and without military sexual trauma. *International Journal of Sexual Health, 24*(1), 45–59. <https://doi.org/10.1080/19317611.2011.639592>.
- Ullman, S. E., Filipas, H. H., Townsend, S. M., & Starzynski, L. L. (2006). The role of victim-offender relationship in women's sexual assault experiences. *Journal of Interpersonal Violence, 21*, 798–819. <https://doi.org/10.1177/0886260506288590>.
- U.S. Government (2014). *Veterans' benefits: Counseling and treatment for sexual trauma, 38 USC §1720D*. Washington, DC. Retrieved from <https://www.gpo.gov/fdsys/pkg/USCODE-2014-title38/pdf/USCODE-2014-title38-partII-chap17-subchapII-sec1720D.pdf>
- van Berlo, W., & Ensink, B. (2000). Problems with sexuality after sexual assault. *Annual Review of Sex Research, 11*, 235–257.
- Walker, H. E., Freud, J. S., Ellis, R. A., Fraine, S. M., & Wilson, L. C. (2019). The prevalence of sexual revictimization: A meta-analytic review. *Trauma, Violence, and Abuse, 20*, 67–80. <https://doi.org/10.1177/1524838017692364>.
- Whiffen, V. E., & Oliver, L. E. (2004). The relationship between traumatic stress and marital intimacy. In D. Catherall (Ed.), *Handbook of stress, trauma and the family* (pp. 137–157). New York: CRC Press.
- Whisman, M. A. (2006). Childhood trauma and marital outcomes in adulthood. *Personal Relationships, 13*(4), 375–386. <https://doi.org/10.1111/j.1475-6811.2006.00124.x>.
- Wiegel, M., Meston, C., & Rosen, R. (2005). The Female Sexual Function Index (FSFI): Cross-validation and development of clinical cutoff scores. *Journal of Sex and Marital Therapy, 31*(1), 1–20. <https://doi.org/10.1080/00926230590475206>.
- Wilson, L. C. (2018). The Prevalence of Military Sexual Trauma: A Meta-Analysis. *Trauma, Violence, & Abuse, 19*(5), 584–597. <https://doi.org/10.1177/1524838016683459>